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Hilbert bases and lecture hall partitions.

In the interest of finding the minimum additive generating set for the set of s-lecture hall partitions, we compute the Hilbert bases for the s-lecture hall cones in certain cases. In particular, we determine the Hilbert bases for two well-studied families of sequences, namely the 1 mod k sequences and the ℓ-sequences. Additionally, we provide a characterization of the Hilbert bases for u-generated Gorenstein s-lecture hall cones in low dimensions. (Received July 10, 2017)